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ABSTRACT

A pilot study was undertaken in preparation for a longitudinal study of the influences of early childhood experiences on children's competence. The pilot study was designed to try out the interviews, observations, and other record-keeping procedures to be used in the main study. The pilot study sample consisted of 19 families with a child 4-to-5 years of age in a family day care or center-based care setting. The children were observed within their early childhood setting a minimum of five times during each of three separate occasions, and two interviews were conducted with their parents or primary caregivers. Pilot study data includes demographic information, parents' perceived benefits of early childhood care, comparison of parents' and teachers' perceptions of their children's competence, and characteristics of early care settings rated high on several variables. The results of the pilot study enabled researchers to: (1) test the instruments and field-work procedures, and the scoring, data entry, and analysis procedure; (2) modify instruments and procedures to ensure that the main study will be effective and manageable for the resources available; (3) prepare guidelines for fieldworkers and coders; (4) indicate important parameters for the main study sample; and (5) indicate some preliminary patterns in the data. (TJQ)

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COMPETENT CHILDREN

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INFLUENCES OF EARLY CHILDHOOD EXPERIENCES

PILOT STUDY REPORT

Anne Hendricks and Anne Meade
in conjunction with Cathy Wylie

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COMPETENT CHILDREN

Influences of Early Childhood Experiences

Pilot Study Report: July 1993

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New Zealand Council for Educational Research

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1993

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INTRODUCTION

In Aotearoa/New Zealand young children's attendance at early childhood services is high by world standards, yet we know little about what helps or hinders children and their families make the most of the investment the families and the taxpayers have in early childhood care and education (ECCE) in this country. The Competent Children research project aims to find out more about the influences of early childhood experiences on children's competence.

In assessing and defining competency in young children, the research team initially focused on the following skills: the capacity to persist, to be self-initiating, to be socially competent, to have positive language skills, to be learning-orientated in approaching adults, to handle the environment, and to feel in control. As the project developed, there was a greater emphasis placed on aligning the research with the aims and goals of the National Early Childhood Curriculum Guidelines as set out in the 1992 draft (Carr and May, 1992).

In January 1992, the Ministry of Education began funding this longitudinal study, to look at the effects of early childhood contexts on children. The first-stage funding allowed the research team to meet 2 objectives:

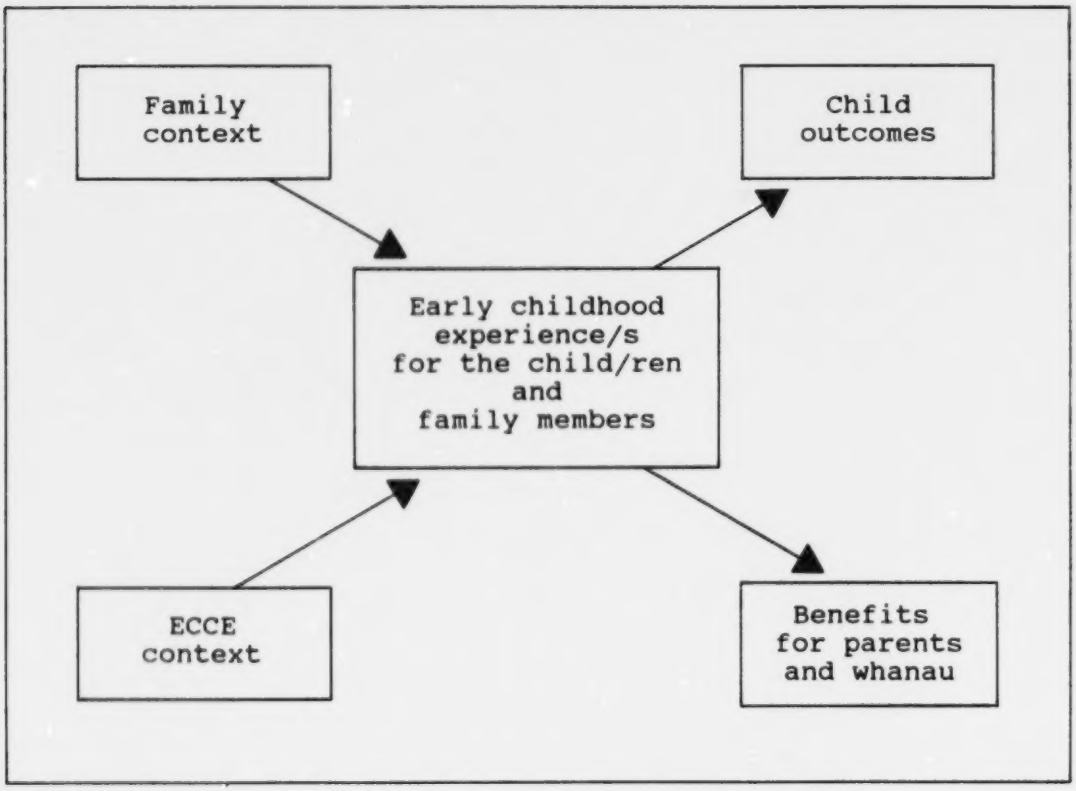
1. to undertake a pilot study for the main longitudinal project, and
2. to conduct an action research study of a small number of children to examine the effects of intervening in their curriculum for learning at home and in early childhood settings, by heightening the adults' awareness of children's schema development (Athey, 1990).

This report focuses on the first objective, and reports on the experiences and results of the pilot study undertaken in preparation for the qualitative study. The action research is still in progress and will be written up in the summer of 1993-94.

The basic design for both these studies is set out in figure 1.

Figure 1

Study Design


Family context
Child outcomes
Early childhood experience/s for the child/ren and family members
ECCE context
Benefits for parents and whanau

Subject to on-going funding being available, it is proposed to study child outcomes for the cohort in the longitudinal study until they leave their last school in the compulsory sector. A longitudinal study will allow New Zealanders to find out more about the impact of early childhood services (ECSs) in this country and, at the same time, set in place the groundwork for a longer-term replication of the origins and destinations component of the Smithfield research project (Lauder, Hughes, and Dale, 1992).

In the mid-1990s, the Competent Children project will have 4 core studies:

1. A large-scale telephone survey of parents of 1500 preschoolers in 1993-94 and in 1995-96;
2. A qualitative study of 300 preschoolers in 1993-94, with follow-up interviews in 1995-96;
3. An in-depth action research study of 10 preschoolers' schema development in mid-1993, in addition to these families taking part in the qualitative study;

4. A non-users' survey in 1 location within the boundary of the sample area.

The mid-1990s phase of the longitudinal study will provide very rich data on the relative effects of family background and early childhood experiences on child outcomes at age 5 and again at age 6.

The research question is: What difference do the variables of:

(a) family background,
(b) costs, availability, quality features of services, and
(c) family interaction/involvement with ECS

make with regard to:

(d) outcomes for child competence and progress in the junior school years,
(e) choice of primary school, and plans for later schooling,
(f) benefits for parents, whanau?

The pilot study started the process of examining this question.

Aim and Outcomes of the Pilot Study

The main aim of the pilot study was to try out the interviews, observations, and other record-keeping procedures that the researchers plan to use in the longitudinal study. After analysing the information collected during the pilot study, the researchers have been able to make changes to some of these procedures and to all of the instruments, in preparation for the longitudinal study.

The pilot study was extremely valuable for the planning of a very complex and ambitious longitudinal study. The research team was able to:

- drop some instruments and shorten and refine the remaining instruments,
- undertake time budgets to work out the assistance needed in the main study,
- develop codes to make data processing more efficient later,
- find out the practical difficulties associated with the research design and develop solutions,
- prepare guidelines for field workers and coders,
- develop data-entry screens,
- practise scoring some schedules, and

- ♦ establish the parameters needed to draw the sample for the main study.

Feedback to Participating Services

Resource limitations prevent an individualised report being prepared for each service, and it may not be ethically proper to do so as specific families could probably be identified. However, a brief summary is currently being prepared and will be made available to all of the ECSs that participated in the pilot study.

PILOT STUDY FIELD WORK

The field work for the pilot study was conducted in the Titahi Bay, Porirua, Linden, Elsdon, Tawa, and Wairarapa areas. Within the Wellington area, the primary reasons for conducting the pilot study within these locations were the potential links with the Smithfield study and the good cross section of families and ECSs. The Wairarapa area was chosen because the research team believed that it would be important to include 1 rural service in the pilot study.

One of each of the following ECSs was randomly selected in the area:[1] a community childcare centre, an urban playcentre, a rural playcentre, a kindergarten, a family day care scheme; and a Pacific Island language group. Each member of the research team was assigned to at least 1 early childhood service, and assumed responsibility for overall management of the research at this particular service.

From an original pilot study sample of 20 families, 1 family chose to withdraw shortly after the initial contact was made, due to a family crisis. Because of time constraints, the decision was made not to substitute another family. The remaining sample consists of 7 boys and 12 girls, whose dates of birth range from August 1987 to November 1988. These children were randomly selected from the rolls, according to the criteria determined by the research team: they were to be between 4 and 5 years of age at the commencement of the pilot study, and ideally should have attended the ECS through which they were located for at least 6 months within the 12 months prior to school entry.

The number of children participating in the pilot study at each ECS setting ranged from 1 (in the case of family day care) to 4 (at centre-based ECSs).

Each child was observed within their early childhood setting a minimum of 5 times during each of 3 separate occasions. The children also took part in a series of tasks designed to evaluate their skills in a range of areas. Two interviews were carried out with their parent(s)/primary caregiver(s) - the Main Caregiver interview (focusing on family background and early childhood history) and Adults' Perceptions of Children's Competencies (focusing on parents' perceptions of their children's competencies).

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[1] Only 1 centre approached declined because of exceptional circumstances at the time.

A staff member who knew each child well also provided their perceptions of the child, again through the Adults' Perceptions of Children's Competencies instrument (which came to be known as the "APCC"). Additionally, the ECS was rated on several clusters of variables, and a profile of the service was developed through interviews with the head teacher, co-ordinator, supervisor, or other knowledgeable respondent.

Most of the interviews with parents involved mothers, although some fathers also participated; either or both parents were welcome to take part. Interviews were conducted at a time and place nominated by individual respondents. Interviews with parents generally took place in the home, sometimes during the evening or weekend, depending upon parental commitments. Interviews with ECS staff were mainly conducted at the ECS, although interviews with some of the playcentre personnel took place at their homes. Towards the end of the pilot study, in the interests of time, some interviews were conducted by telephone and this approach worked well.

Many of the children in the pilot study have now started attending primary school. Permission has been received from the children's parents and from principals for each child's junior school teacher to be interviewed towards the end of the child's first year at school. Data on school achievement will also be gained from school records. Schools have unanimously given their support to assisting with the project.

The pilot study was one of the first occasions when a research team in New Zealand has undertaken field work in family day care settings and in a Pacific Island language group. These experiences deserve special attention in this report and are discussed before more general findings are presented.

Pacific Island Language Group

A Samoan-speaking research assistant, Sefulu Hermens, joined the research team to assist with interviews and observations within the sole language group participating in the pilot study. There were complexities involved in this phase of the research that had not previously been encountered. Considerably more time was needed for negotiating access to families and setting up interviews (some families did not have a phone), as well as for the interviews themselves. Cultural differences are reflected in the extra time taken to cover the range of topics in the interview schedules. Additionally, although the children were identified as having English as their primary language, the general impression gained by the researchers was that these

children's receptive and expressive English language skills were not as strong as those of the other children in the sample.

The research team is concerned that the instruments used in the pilot study do not cover the range of competencies valued within the Samoan community. During advisory committee meetings, Samoan representatives have emphasised the importance that Samoan families place on the oral tradition - specifically the ability for a child to orate and "entertain" - as well as the high degree of importance assigned to the spiritual component of a child's character. These competencies were not included in the pilot study research instruments and, moreover, they are hard to define and measure. The research team has been able to make only minor adaptations to the instruments for the main study, to be more inclusive.

Although the instruments used in the pilot study were designed to capture a range of competencies, the researchers are aware that the focus was on capturing competencies that are valued by Western cultures and, as such, these competencies tend to be nurtured within mainstream ECSs' programmes. The researchers hold the view that it is inappropriate to make a direct comparison between the Samoan language group and the Western ECSs in the pilot study.

It should also be noted that many of the Pacific Island language groups are apparently staffed by ex-primary school teachers, as a result of a surfeit of teachers in their home countries who have sought alternative employment. (This was the case for the language group in the pilot study.) As a consequence, the environment in some of the language groups is much more structured than in other ECSs. For example, during pilot study observations large-group, adult-directed activities took place frequently, and there was an emphasis on rote learning of vocabulary. It has been difficult to "unpack" these confounding variables when trying to gain a picture of the influences of the language group on the pilot study children.

Family Day Care

Undertaking field research in a family home is a markedly different context from centre-based data collection. A number of happenings reminded researchers of these differences; only a few examples are given in this report.

It is very hard to stop the target child interacting with the researcher when the child is conscious of the presence of a different adult in a home situation, where there may typically only be 2 children and the paid caregiver present. This leads

to difficulties for the researcher in deciding which interactions to code. The paid caregiver has a heightened awareness of the researcher in her home observing the adult and the child's every move. She has to limit her outings with the child while the researcher is there or, at the other extreme, may take advantage of the researcher being in the home to "just pop down the road for a quarter of an hour"! There is a greater likelihood of the paid caregiver and the parent swapping notes about the APCC interview, so that the validity may be more a result of their discussion than of their independent opinions of the child.

The challenges inherent in carrying out research in a family day care setting have been documented by the pilot study research team, so that researchers conducting observations for the main study will be sensitive to the necessity to be as inconspicuous as possible. Additionally, researchers will need to set clear guidelines for the caregivers from the outset to avoid any misunderstanding of the researcher's role. For example, researchers will state firmly that they are unable to accept responsibility for "keeping an eye on the children", to transport the children from one place to another, or to share information between parents and caregivers (all of which they were asked to do during the pilot study phase).

DATA ANALYSIS

After the field work for the pilot study was completed, it was apparent that there was a wealth of data and we would not have the resources to analyse all of it in detail. Owing to time constraints involved in setting up data-entry programmes, a decision was made to perform data entry on selected subsets of the data only; the raw data were also reviewed. Data entered into the computer were analysed using PC SAS.

Scoring of some of the instruments has proven to be a challenge. Where possible, existing systems for scoring similar instruments were adopted. Advice has also been sought from the Research and Statistics Division of the Ministry of Education, and the New Zealand Council for Educational Research. Categories were developed for coding verbatim responses from parents, ECS staff and children; data from scales of 1 to 5 used in some of the instruments did not require further coding.

Selected data tables are included within this report. Because of the small sample size, in-depth analysis cannot be carried out on the pilot study data. Nevertheless, there are some interesting patterns which have emerged. Verbatim comments extracted from the interviews are included in some parts of this report to provide additional insights.

RESULTS

To protect the confidentiality of each ECS, as well as staff and families, no individual children or ECS will be identified in this report or in any other report associated with this project.

Main Caregiver Interviews

The Main Caregiver interview typically provided the first opportunity for contact between the researcher and the parent(s). The purpose of this interview was to gather information about the child and the family/whanau, capture a history of the child's attendance at ECS, and gather parental perceptions of - and involvement with - ECS. It took at least an hour and a half to administer. In advance of the interview, parents were sent an overview of the more detailed questions that were to be asked, so that they had time to recall or look up information relating to milestones and ECS histories.

Questions about ECSs focused on the (one or more) ECS that the child currently attended, as well as any ECS that the child had previously attended on a regular basis for at least 6 months; details were requested regarding up to 3 ECSs per child. Additionally, demographic data were gathered.

Demographic Data

All parents were asked questions regarding household composition, highest secondary school and post-secondary school qualifications, main source of income, income range, employment status, and children's ethnicity. Where relevant, questions were asked of both the respondent and the respondent's partner. Some respondents chose not to answer certain questions, such as those related to employment and income. Additionally, parents were asked whether or not they had a phone, television, washing machine, stereo, video, computer, or second car; the rationale for asking this series of questions was its potential link to cultural capital issues.

Tables 1 to 6 present the demographic data. As seen, both sole- and 2-parent families were represented in the sample, and family size ranged from 2 to 7. Fewer than half of the parents had qualifications beyond School Certificate level; 92 percent of mothers and 38 percent of fathers had no post-secondary school qualifications. With regard to parental employment, it can be seen that the majority of the parents were in paid employment,

either part- or full-time. More fathers than mothers were in paid employment, and fathers were also much more likely than mothers to have full-time rather than part-time work.

The main sources of income were wages or salary for 48 percent of the households, with a further 28 percent reporting that income came from self-employed earnings or the proceeds of a business. For 19 percent of pilot study households, some form of benefit was the main source of income. In some cases, this benefit was supplemented by a small amount of casual or part-time work. There was a tremendous range in the household income reported, from families who were solely in receipt of a benefit, to a family whose income was in excess of $80,000 per year. Families in rural areas and those who were self-employed found it difficult to estimate their annual income, as any profits were frequently reinvested into the business.

Mothers who were not in paid employment did not classify themselves as "unemployed"; rather they were likely to state that they had made a conscious decision to be at home with their children while their children were young. Parents who were not in paid employment were told that it would be helpful to know why not. The reasons given tended to relate to parents' desires to be at home with their children, as demonstrated by the following comments:

> There's no point in having them at such a late age and not being home to enjoy them ... or giving them to someone else to look after.
>
> My children need me.
>
> I don't have to work (in a paid job), I have a choice and I have chosen to stay at home.
>
> My husband and I prefer that I take care of the kids.

There has been ongoing consultation with the Smithfield team regarding the best approach to coding parental occupations. The difficulties outlined are clearly discussed in the Smithfield Milestone Report (Lauder, Hughes, and Dale, 1993). To summarise, they question whether current employment status can be used to provide a valid reflection of the class background of a family, in view of the prevailing economic conditions in which considerable unemployment, sub-employment, and short-term contracts are common. Secondly, they question the limitations of current measures of social class which are typically based on the occupation of the male parent/caregiver, ignoring the strong impact of women in paid employment.

Reflecting the range of cultures in the pilot study area, 64 percent of families described their children as

"Pakeha/Kiwi/New Zealander/European"; Samoan, Maori, and Cook Island Maori families were also represented.

Limited analysis has been done on the cultural capital questions; these will be retained in the main study. Within the pilot study sample, there was perhaps a tendency for families to see washing machines and television sets as essentials; both appliances were owned by all families interviewed. However, reflecting the high cost of telephone rental, 10 percent of families were not on the phone. This meant that making appointments to meet with these families was often a complicated process, which was somewhat eased by the willingness of friends and whanau to pass on messages.

Table 1
Household Composition

Family composition	No.	%
Two-parent families	16	84
Sole-parent families	3	16
Total	19	100
Permanent household members:		
Two	1	5
Three	2	11
Four	7	37
Five	5	26
Six	2	11
Seven	2	11
Total	19	101*

* In some tables percentages may not add up to exactly 100; this is due to rounding error

Table 2

Highest Qualifications of Parents

School-leaving qualifications	Mothers No.	Mothers %	Fathers No.	Fathers %
Bursary/HSC	5	26	2	13
UE/Sixth Form Certificate	4	21	4	25
School Certificate	2	11	6	37
Less than School Certificate	8	42	4	25
Total	19	100	16*	100
Post-secondary school qualifications:				
Postgraduate degree	1	5	0	0
Undergraduate degree	0	0	2	12
Trade/other tertiary	9	47	7	44
None	8	42	6	38
Other qualifications**	1	5	1	6
Total	19	99	16	100

* Qualifications of non-resident fathers were not captured

** Other qualifications include LTCL (Speech and Drama) and internal company qualifications

Table 3

Main Sources and Range of Income

Source	No.	%
Wages/salary	10	48
Self-employed/proceeds of business	6	28
Family Support/other benefit	4	19
Other*	1	5
Total	21**	100

Salary Range	No.	%
Over $80,001 per year	1	5
Between $70,001 - 80,000 per year	-	-
Between $60,001 - 70,000 per year	4	21
Between $50,001 - 60,000 per year	1	5
Between $40,001 - 50,000 per year	2	11
Between $30,001 - 40,000 per year	3	16
Between $25,001 - 30,000 per year	2	11
Between $20,001 - 25,000 per year	-	-
Between $15,001 - 20,000 per year	2	11
Between $10,001 - 15,000 per year	1	5
Between $ 7,501 - 10,000 per year	-	-
Between $ 5,001 - 7,500 per year	-	-
Between $ 2,501 - 5,000 per year	-	-
$2,500 or less per year	-	-
Refused/unable to calculate***	3	16
Total	19	101

* Other = investments

** Total adds up to 21 due to some families citing more than one main source of income

*** Some respondents were unable to answer this question because the proceeds of a business (e.g., farm) were reinvested rather than being drawn as wages

Table 4

Employment Status of Parents

Employment	Mothers No.	Mothers %	Fathers No.	Fathers %
Full-time	3	16	12	75
Part-time	8	42	2	12
At home	8	42	0	0
Unemployed	0	0	2	12
Total	19	100	16*	99

* Employment status for non-resident fathers was not captured

Table 5

Ethnicity of Pilot Study Children, as Described by Their Parents

Ethnicity	No.	%
Kiwi/New Zealander	6	32
European	6	32
Maori/Pakeha	2	11
Samoan	2	11
Samoan/English	1	5
Samoan/European/Maori	1	5
Cook Island Maori	1	5
Total	19	101

Table 6

Items Found in Home/Cultural Capital

Item	No.	%
Telephone	17	89
Television set	19	100
Washing machine	19	100
Stereo	18	95
Video	17	89
Computer	9	47
Second car	11	58

Child Development and Major Life-style Changes

Because it is known that developmental delays, hearing loss, "glue ear", and other factors may impact on a child's overall development, particularly their language skills, Section B of the Main Caregiver interview focused on childhood milestones and a brief medical history. Parents were asked whether there had been any problems during birth or infancy, whether the child had had any serious illnesses or accidents, and how they would describe their child's general health. Milestone data (regarding age of walking and saying of first words) were captured. Parents were also asked whether their child's hearing and vision had ever been checked, and whether their child currently needed specialist attention or had any medical or other needs.

Although none of the children in the pilot study had any serious medical or other problems, this section of the interview did reveal interesting information. Several of the children had been seen by speech and language therapists (for example, for delayed language development, cleft lip and palate follow-up) and permission was gained from the parents to request a brief report from the therapists whom these children had seen. One of the children had a congenital arm condition, resulting in restricted movement, another had been in a very bad car accident at a young age (although no long-term effects were evident), and one had been operated on at age 3 for a serious renal condition. Most - but not all - of the children had had their hearing and vision checked, often when the hearing and vision specialist visited the ECS; some had a history of otitis media. Several of the children had allergies and/or were taking medication for asthma.

To uncover additional potential influences upon the child, parents were asked if there had been any changes in the family's life over the past 3 or 4 years, such as a change of house, change in the people living at home, or other things that the family had had to adjust to. Although we have not made any attempts to correlate any changes reported with outcomes for children, answers to this question frequently provided details that helped to set the scene for additional information provided later in the interview. Among the most frequently reported changes were births of siblings, deaths of whanau, job stresses and unemployment, financial difficulties, surgeries or illness, and moving house. Specific major changes in pilot families' lives included the birth of a child with a disability, a major life-style change resulting from a move from the city to a rural community, and the "hard slog" in a family-owned business.

For the main study, this question has been slightly revised so that there will be a greater emphasis on identifying changes that the target child (rather than the respondent) has had to adjust to.

Attendance Patterns

The Competent Children research focuses on the influences of early childhood care and education variables, thus obtaining a detailed history of each child's attendance at ECSs is essential.

Section C of the Main Caregiver interview requested that parents identify all of the different care and education arrangements that they had had for their child, since birth; in other words, anywhere that the child had regularly spent more than 2 or 3 hours per week, other than with a parent. Researchers captured data relating to the type of arrangement, the dates the child had attended, and how old s/he was when s/he stopped and started going.

Compared to ECS attendance patterns overseas (where children are much more likely to attend only one type of ECS before starting school), New Zealand attendance patterns are much more complex, reflecting the diversity of services available. This complexity is demonstrated in the histories of the pilot study children.

Table 7 presents data on the children's attendance at different ECSs. It can be seen that the children have attended a wide range of ECSs, with kindergartens and/or playcentres having been attended by more than half of the children at some point during their first 5 years.

Early Childhood Services Attended by Pilot Study Children

Number of children in pilot study who have attended/currently attend different early childhood services, by ECS type	No.	%
Private Care (care by relative or friend)		
Yes	8	42
No	11	58
Family Day Care		
Yes	2	10
No	17	90
Playgroup		
Yes	4	21
No	15	79
Childcare Centre		
Yes	7	37
No	12	63
Playcentre		
Yes	10	53
No	9	47
Pacific Island language group (PILG)		
Yes	4	21
No	15	79
Kindergarten		
Yes	12	63
No	7	37
Private Preschool		
Yes	2	10
No	17	90
Current ECS attendance only		
Total ECSs now attended:		
1	9	47
2	10	53
Children Attending 1 ECS Only:		
ECS type:		
Kindergarten only	4	
CCC only	2	
PILG only	2	
Playcentre only	1	
Children Attending 2 ECSs:		
ECS type/combination:		
Playcentre/kindergarten	2	
Playcentre/private preschool	2	
Playcentre/family day care	1	
Playcentre/private care	1	
Playcentre/CCC	1	
CCC/PILG	1	
Family day care/kindergarten	1	
PILG/private	1	

Multiple Use of Early Childhood Services ("Packaging")

Many of the pilot study children currently attend more than one ECS. Reasons given for attending more than one included the following: opportunities for the child to meet a wider range of children and adults, a need for the child to have time away from parents and siblings, exposure to a broader range of activities, fitting in with parents' schedules (for example, work, study, or home commitments), a lack of sessions available at one ECS, opportunities to learn another language and strengthen cultural awareness, and a desire for more structure in the belief that this would help the child adjust to school more easily. Comments offered by parents whose children have attended more than one ECS include the following:[2]

> At that time, only 1 morning a week was available (at ECS), she needed more than that - she's a very sociable child who's always loved other people's company - she needed a wider range of children and more time with them.
>
> (ECS 1) is more structured than (ECS 2) ... he has to conform, be there at the same time ... time is organised ... it's getting him into little habits ready for school and will make the school transition easier.

In the rural community, the fact that transport was able to be shared among parents eased any difficulties that might otherwise have arisen when children must be driven over quite large distances to get from home to ECS.

One parent reported that her misconceptions about what actually occurred at 2 different ECS types had been corrected once her child had started attending both:

> The impression was fixed in my mind that children who went to (ECS 1) just hooned around and did nothing constructive and so I wanted (ECS 2) to provide a balance. In actual fact there is very little difference between them, nil in fact.

There were no reports of problems for children or families resulting from attending more than one ECS at the same time, although several parents reported a need to be very organised. At least one parent was surprised at how well she had coped with the complexities involved in having multiple arrangements. For

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[2] Throughout the report, some of the comments regarding ECSs are about ECSs other than those in the study.

children in family day care, it was the caregiver who handled the logistics of getting the children from one ECS to the other, so parents tended not to be aware of any practical difficulties which may have arisen.

The range of ECSs attended by individual pilot study children was revealing. One child had been exclusively at the same ECS (an employer-based childcare centre) from infancy to age 5, whereas another child had been to at least 7 (that the parent was able to recall). The characteristics of each family were quite different. The first child had 2 parents in paid employment, both with flexible working hours, and the ECS was based where one of the parents worked. For a time the family had also lived in the same complex in which the childcare centre was based. The second child came from a sole-parent family which had moved frequently, and the parent had been juggling both work and study for many years. At various times, this child was attending 2 or 3 ECSs concurrently. For other pilot study children the history was less complex; however, it was rare to meet a child who had been to only one ECS.

Age of Entry and Exit

The ages when children first started attending the different ECSs varied widely. Private care and education (for example, by a relative or friend) would often start when the child was several weeks old. Some children also began attending playcentre from a very young age, sometimes going along with an older sibling. Several parents reported that a playgroup was their child's first ECS.

At all of the ECSs visited, the children taking part in the pilot study planned to remain at their current ECS until starting school. In some cases, such as private care and family day care, the arrangement was to continue even after the child had started at school, in the form of before- and after-school care and education.

Cost as an Influence on Attendance Decision

For each of up to 3 ECSs that children had attended, parents were asked: "When you decided on (this ECS), did cost have anything to do with your decision?" The answer to this question was rarely in the affirmative. Rather than cost, factors such as the following were frequently mentioned as influential: the reputation of the ECS, positive prior experiences with the ECS

(for example, with an older sibling), convenience (for example, location, time of sessions), and opportunities for the parent and/or child to be involved with others.

> I'm a (ECS type) mother - I took my older children there, so I thought this would be right for her too.
>
> My motive (for sending child there) was being able to be involved.
>
> This was a good centre - recommended by a friend.
>
> We had just moved out to this area - it was a good way to meet people, especially children he would go to school with - it was good for both of us socially.

For those parents who did cite cost as an influence, fees subsidies, and other cost-reducing measures were mentioned:

> I could get a fees subsidy as longer hours were used. He would never have gone to (this ECS) without the subsidy, because I was on the DPB.
>
> Cost was a consideration ... one way of keeping fees low was via parents being rostered on duty.

Some parents referred to cost in answers to other questions, as shown in the following comments. For these parents, the current ECS would not be their first choice, but the cost of sending children to the preferred ECS was a prohibitive factor:

> I would prefer (to send child to) creche, but it's $10 a day.
>
> If I could, I would send (the children) to Montessori or creche, because they do have good ratings, but they're more expensive.

Family-staff Interaction

One of the variables that the Competent Children team is exploring is how family interaction and involvement with ECSs impact upon child outcomes and benefits for parents and whanau. It is well known that ECSs can be significant for other family members as well as for the child who attends. New Zealand has a reputation for facilitating considerable parental and whanau involvement in many ECSs; for example, playcentres are run entirely as parent co-operatives, and nga kohanga reo are based on whanau development. Chartered providers are now required to provide parent education and support.

To find out more about relationships between parents/whanau and ECS staff, the Main Caregiver interview included a series of questions focusing on both day-to-day and on-going interactions. Parents were asked to talk with the researchers about how much the ECS staff filled them in on what went on during the day and whether these staff had the same approach to their child that the parents had. Parents were also asked whether they had ever worked with staff to sort out children's problems. Additionally, if the ECS was centre-based, parents were asked if they had been encouraged by the staff to get involved with any activities, and - if they *had* become involved - whether there had been any associated benefits for themselves resulting from this involvement.

Answers regarding feedback from ECS staff about children revealed a wide range of attitudes and expectations. Some parents expected - and received - regular feedback from staff, others expected more than they actually received and were disappointed; some parents appeared satisfied with minimal feedback. One parent commented that because she is older, she trusts her own judgment more "... whereas a younger less-seasoned observer might need more reassurance (from the staff)".

Parents who appeared to be satisfied with the amount of information exchanged offered the following comments:

> They always support us and talk about what went on.
>
> There is a progress book, with photos - the staff will pass on when she does something like tie a shoelace, or fun things, like her doing step-aerobics.
>
> I usually ring (ECS caregiver) most days to make sure everything's O.K., to tell her if she has had a bad night, needs a rest, is extra grumpy, or wouldn't eat breakfast etc. I get similar messages back - (caregiver) fills me in on where they've been, who they've seen etc.

Several parents mentioned difficulty in sharing information between parents and staff because of the low adult-child ratio:

> It's very hard on (ECS staff) time-wise. If I know something is wrong, I will ask them. (They tell me) if something has happened, if she has said something really funny, or hurt herself. I wish they had a bit more teachers, sometimes they're pushed ... it's not their fault.
>
> I don't think I ever got filled in on what had happened at a session at all ... I had to make an

effort to find her paintings etc... but the staff were dealing with so many other children as well.

There were about 30 other children there and there was not time to discuss him in particular.

At some ECSs the policy appears to be not to initiate contact with parents unless there is a problem:

If there are any problems I will hear about them. Last term she was withdrawn and unhappy - (staff) told me and made a point of seeing me. They will tell if a child is sick or whatever, but won't fill parents in otherwise.

At centres with a high degree of parental involvement, information about the children is often shared on an informal basis among parents. They report that feedback from other parents is valued, and results in what one parent described as "an informal group information exchange".

However, not all ECS staff freely share information. Parents with children at one ECS (not one of those participating in the pilot study) reported that discussions about the children generally required a formal approach to the staff.

If you ask, you're shown their books, activities etc. If (ECS staff member) is concerned about anything, she will approach you. She doesn't give every parent a rundown on what the child did during the session and the children don't tell much.

She doesn't fill me in very much at all, but there is always an open invitation to make a time to discuss (things) - (ECS staff member) is prepared to talk, but by appointment, not on a casual basis.

It also appears that children who are quieter or generally blend in are less likely to be commented upon to their parents:

She is content to go with the flow ... very co-operative ... went along ... played ... tidied up ... (there was) not usually much to report about her.

She was not demanding of their time, so not a lot of time was spent with her.

She's such a together child, there's usually not much to fill me in on.

Over all, it would appear that there is sometimes a mismatch between parents and staff regarding the optimum amount of contact. Parents may be reluctant to seek advice or information

from staff who they perceive as being too busy to respond to the needs of the child; some parents may also perceive staff as being insensitive to the child and the whanau at times.

Resolving Problems

Another facet of parent-staff interaction which was explored was parent and staff collaboration on problem-solving at the ECS. Parents were asked whether they and the ECS staff had ever sorted out together any problems that their child was having.

Among the very few problems reported, social-emotional issues predominated. These were usually resolved by the staff being made aware of the concern and consequently spending more time with the child. Such problems appear to be reasonably common during the settling-in or phasing-out periods, as described in the following comments:

> Only (problem was) getting him settled in. (Staff) was very co-operative then and made a bit of a fuss, got him involved in a few activities so I could leave and he was fine.
>
> She has been a bit reluctant to go lately - says it's boring, because she has just started visiting school. I have asked (ECS staff) to keep an eye on her to keep her busy. They have been very good, very supportive, keeping her involved.

Sometimes the child initiated the approach to staff: for example, a child who approached ECS staff, saying that she needed extra cuddles; this was at a time when things were not going well between parents, and the parents had shared this with the ECS staff.

One parent expressed disappointment that the staff had not been more receptive or sensitive to her child's needs:

> I explained that (child's sibling) was having problems and that was having an impact on her, but it didn't seem to register with the staff. I was surprised and disappointed that it didn't register - they looked at me with blank faces. I had told them because I knew that (these problems) would probably have an effect on her.

In this case, the lack of sensitivity impacted on both the parent and the child.

Another parent reported that she had asked for her child to be given more direction and more stimulation, but was not sure

that the staff were actually doing anything. This highlighted a difficulty with the lack of feedback at this particular ECS.

However, in general, there were few problems reported, and certainly none of a serious nature. Most parents reported that there had never been any problems, or at least none that they could recall. Things had generally gone smoothly, as exemplified in the following comment:

> I can't remember any major problems or conflicts - it sort of chugs along happily.

Parental Activity While the Child Was at ECS

Although some parents remained at the ECS while their child was there, other parents used this time to do other things. The decision to stay was sometimes influenced by the age of the child, with parents being more likely to stay with younger children. Among parents who did not choose to remain at the ECS, answers to the question: "What did you do while (your child) was at ECS?" were coded into one or more of the following categories, which reflected the most common responses:

- Paid work
- Look after other child/children
- Pursue own interests (including "time out", study)
- Housework, farmwork, shopping
- Visit friends or relatives
- Voluntary work

Often these activities varied from week to week, or from year to year, according to the parent's needs or other demands:

> I visit my grandmother one day a week. I muck around, clean up, sell Avon, catch up on things. Next year I am going back to school and getting him into (ECS) 5 days a week.
>
> I was doing a paper at university, and then later had a part-time job.
>
> Sometimes I do shopping at the supermarket. If it's a nice day I take (younger child) to the park, or visit my husband at work ... if I am at home, I do housework or play with (younger child).

One parent at the rural ECS said that she always stayed, because of the time it took to get from home to ECS, and the cost of petrol involved in making the return trip.

Many parents replied that they had been encouraged by ECS staff to get involved with ECS activities. Their involvement is described in the following section.

Parental Involvement with ECS

Not all parents were able, or wished, to get involved in activities at their child's ECS, and some centres were perceived to be much more parent-oriented than others. However, most parents (mainly mothers) had been involved with ECS activities at some stage or another, and non-involvement was the exception. Those who did become involved typically reported doing one or more of the following:

- Helping with fundraising and/or public relations
- Leading or attending training courses
- Cleaning, preparing food, and participating in working bees
- Helping with special events, trips, or transport
- Attending meetings, being on committees
- Assisting with charter development

Some of the parents who became involved reported associated benefits for themselves, such as enjoying the company, support, and friendship of other parents and children, gaining a better knowledge of child development, and feeling a sense of achievement and belonging. Some parents gained confidence and developed skills that they were able to use in other situations. A few parents felt that they had not gained anything from their involvement; some felt frustrated due to perceptions that other parents did not want to pull their weight.

> I enjoy it (being involved) - it's nice to see other children and have time to interact with other children as well as your own. Watching the change and growth is exciting.
>
> (Involvement) has been the most wonderful way to get know a new neighbourhood.
>
> (My involvement) is making up for my own lack of preschool experience. When I participate, the children enjoy it and I get a buzz because the children enjoy me. I've really enjoyed it - I've learned a lot about child development - children's needs, my own needs. I've made friends with other parents and children.
>
> The nature of the charter negotiations was helpful in my work ... e.g., how do we set and process change,

how do we evaluate this? I've learned these skills from the charter process; it was a good experience.

Parents who did not get involved offered a range of reasons, including having no spare time due to work, study, and/or family commitments, lack of agreement with the ECS programme or staff approach, and living too far away from the ECS. Other parents had given their time in previous years and now felt it was time for others to become involved. The following comments offer insight into why some parents have chosen not to become involved, and why one parent feels frustrated by the lack of involvement of other parents:

> I wouldn't be interested (in getting involved), can't be bothered ... the idea is for me to have a break, not to join up with everything.
>
> (Child's sibling) was very time-consuming, extremely difficult, so there was no opportunity to get involved really.
>
> I have a distinct non-involvement policy with (ECS) - I pay the money and use the service. The key factor is the distance ... it's not part of my community.
>
> I'm the social convenor, but parents can't afford trips, or can't be bothered, therefore it's difficult to organise things.

One parent described an ECS fundraising effort involving selling lollies. The child was sent home with them and thought they were his: "They're mine, from ECS". She and the children ended up eating most of the lollies themselves, only selling a few. Not unexpectedly, this parent did not feel that had she had been given any choice about becoming involved.

Thus, although at some ECSs there is a clearly stated policy regarding parental involvement, at other ECSs unspoken assumptions regarding the degree of involvement expected can lead to dissonance not only between parents and staff, but also *among* parents.

Similarity of Approach Between Parents and ECS Staff

Parents were asked, "Did the ECS staff have the same approach to (your child) that you have?" Most parents reported that the staff had the same, or a similar approach, although some parents found this question hard to answer, particularly those who had minimal contact with the staff.

In an ECS based on parent involvement, parents tended to comment that because the parents had a shared commitment to the philosophy of the ECS, the parents and staff who were attracted to this ECS shared a common approach to the children.

> We're all of a similar ilk, although from different walks of life; we seem to have a similar attitude to what should be going on at (ECS). All the mothers treat their children the same as the other children, no one sticks out as handling children differently, we're all pretty similar in our approach.
>
> People take their children to (ECS) because they put their children first, and parents enjoy it. It requires a commitment, and if you're willing to put that in, that's important.

One mother commented that no one can have the same approach to a child as the mother, and she never expected that. Nevertheless, she found the staff's approach "very constant, very loving and matter-of-fact". Another commented that she is satisfied with the approach, although it differs from hers: "... (ECS staff member) has a more professional approach, not maternal". A different approach need not necessarily be seen as negative, nor result in the child being withdrawn from the ECS: differences in approach were recognised, but not condemned.

> She was stricter about upbringing and philosophy - children *must* sleep, tidy up etc. - more authoritarian.
>
> (ECS staff) are a bit more formal ... slightly reserved, more of a pupil-teacher relationship, rather than parental. That approach can shake children a bit, (they're) on their own, closer to the cold, cruel world. In some ways it would be nicer to delay that - it's a pity they have to grow up. Getting ready for school is a two-edged sword.

A parent in a cross-cultural partnership, whose relatives looked after her child from an early age, offered the following observation:

> (Their approach) was totally different from the palagi upbringing. They wouldn't let her cry ... she is the first-born and a "princess" to them. They taught me a lot of things ... breast-feeding ... different foods ... ways of bathing etc.

One parent was concerned about the occasional lack of known supervision in a private caregiving arrangement, frequent

unplanned trips "out and about", and not being informed by the caregiver about what was going on. When the caregiver who had previously looked after the children became available again, the parent removed her child from the unsatisfactory arrangement.

In general, parents' answers regarding similarities of approach between parents and ECS staff suggested that this was not a matter that had previously been thought about. This may suggest that, on the whole, within the pilot study ECSs a similarity of approach was the norm; if not, there may have been many more parents willing to highlight differences.

Benefits Gained Through Attendance at ECS

Parents were asked what they thought their child got from attending ECSs. Responses to this question included the following benefits, which were mentioned by many parents:

- **Social-emotional benefits:** These typically highlighted opportunities for meeting and mixing with other children, chances to become more independent, and opportunities for children to develop greater self-confidence.

  > She gets to play with lots of different children of different ages and interact with adults with different ideas. It's a really social thing! She gets to extend herself ... is quite at ease there - really likes to participate - she's quite comfortable, an old hand, sees it as "her place".
  >
  > (ECS) is like an extended family ... all of the mother:child connections are known to us all.

- **Cognitive-language benefits:** Parents mentioned how their children benefited from the stimulation of ECS activities, and exposure to experiences not available at home.

  > He got a lot of stimulation, a lot of one-to-one - a variety of stimulation from the environment ... there was a noticeable emphasis on education and socialisation skills ... he was like a sponge and soaked it all up.

- **Physical benefits:** Several parents mentioned that their children had gained increased confidence with physical activities as a result of activities at ECS.

  > This was a happy time for him ... he enjoyed the playground with its fort and slide ... he is a very physical child.
  >
  > She gets to play with bikes ... a tree-house and lots of outdoor activities ... there are lots of

activities to extend her ... experiences she doesn't have at home.

- **Cultural benefits:** Cultural benefits included exposure to the child's own and/or other cultures, and opportunities to learn another language. Parents at the Samoan language group were proud that their children were able to speak the Samoan language and were very pleased that cultural values were being transmitted via the group.

  He can now speak Samoan well.

  He's learning the Samoan language and culture.

  It's great to have a Samoan preschool.

Some parents did not focus on one particular benefit, but instead mentioned that the whole experience had been positive, and that their child had got a great deal out of attending:

> He gets a lot out of it and always comes home very buoyant, has a neat time. He's out of bed like a rocket when it's (ECS) day - never says he doesn't want to go - he loves it.
>
> She gets loads ... contact with other children ... all the activities ... Maori language - another culture ... comes home with so many things.
>
> She gets lots of interesting ideas to make things ... it has helped her physically ... she has her own little group of friends. She sees it as "her place" - her little part of the world.

Some parents see early childhood education as preparation for school, and life in general:

> The sense of structure ... will benefit her for school. (She has learned to) go back to work in process and go on with it - an ongoing project. She gets to deal with a big cross section of children from different backgrounds - this is a useful skill in life, the earlier it is learned, the better.

One parent's perception of what the child was getting from attending the ECS was altered through discussion with ECS staff:

> I wanted her to do "work", not play - I felt that she needed to be taught and educated. It seemed that children were taught to make a mess and then clean it up, that (ECS) is to have good time. (ECS staff) helped by talking to me and explaining what was going on.

One parent whose child had been attending the same ECS from infancy reported that what the child had gained from attending ECS had changed as the child got older. Early on, he had received nurturance; later the nurturance had continued, but as the child developed activities were introduced and there were greater opportunities for him to socialise with other children. This parent also appreciated the welcome she had always received from the staff. She had never felt unwelcome, or that there were topics that could not be discussed. She believed that if she had felt uncomfortable at the ECS her child would have picked up on this and would not have felt comfortable either.

Not all parents sang the praises of the ECS that their children had attended. One felt that the ECS had not been structured enough, and that there had not been enough one-to-one contact with staff. Some parents reported that they really did not know what their child had got out of ECS; one added:

> I've never really thought about it. I sent her because it seemed the thing to do.

Another parent responded to this question by replying, "I don't know - is he supposed to get something out of it?" After a brief pause, however, she was able to list a range of associated benefits, including the opportunity to mix with other children (which he would not have had at home, as his siblings and the neighbourhood children were at school all day), the wide range of toys available at the ECS, and the chance to get a break from his mother.

Some of the parents whose children were currently going to more than one ECS appreciated the contrasting yet complementary benefits associated with each ECS, particularly when one ECS was more structured than the other:

> She feels secure (at ECS 1), has great fun. She has learned to get on with other children and developed friendships for the first time ... this is less structured than other places. (ECS 2) provides more preparation for school, with a more structured timetable, mat-time etc. She benefits from this structure.

Thus, for many parents there were clearly identifiable benefits from attendance at ECSs. Even those parents for whom benefits did not readily come to mind were eventually able upon reflection to identify benefits.

Finding Suitable Early Childhood Care and Education

Parents were asked whether they had ever had any problems finding suitable care and education for their child. Most parents answered that they had never had any trouble, some citing support received from family and friends, and others mentioning the wide range of ECS options that were available to them.

> Friends and family always help out.
>
> I struck gold with the first arrangement.
>
> We've had preschool education coming out of our ears!

Among the few parents who did report problems, long waiting lists and ECS costs featured prominently, and other problems were also identified:

> There was a big waiting list - there should be 2 (of this ECS) for the community and we should have 3 (staff) permanently, it's atrocious.
>
> Finding something that suits her (has been a problem). I think she'd be better off going to one of the creches ... but the cost ... I can't even afford to pay the (current ECS) fees.
>
> When (regular caregiver) was away for several months, I was a bit concerned about where to send the children - the alternative (caregiver) wasn't always the way I'd like it, not as settled. It was the norm for (regular caregiver) to keep me informed, but this was not the case for the alternative.

It should be pointed out that compared to the (very small) non-user sample, the parents in the pilot study did not face - or at least did not mention - obstacles relating to a lack of transport, partners' unwillingness for a child to attend the ECS, unsatisfactory ECS experiences of children, or lost or "missing" names on the waiting list, all of which were mentioned by non-user families as reasons why their children were not currently enrolled in an ECS.

Transition to School

"Choice" about education is one of the themes shared by the Competent Children and Smithfield project teams. To capture parental perceptions regarding choice, respondents were asked: "As a parent/caregiver, how much choice do you believe you had in choosing the school (your child) is to attend?" Answers to this question are presented in Table 8.

Table 8

Parents' Choice of School

Choice	No.	%
A lot of choice	11	55
Some choice	6	30
Little choice	2	10
No choice	1	5
Total	20*	100

* Total number of respondents is 20, because in one case both partners answered this question (one answered "some" and the other answered "a lot", signalling that the same degree of choice can be viewed with different perspectives)

As seen in Table 8, the majority of the parents perceived that they had "a lot" of choice, with "some choice" being the next most frequent answer. Only 3 parents considered that they had "little" or "no" choice.

Parents in rural areas were more likely to mention that their choice had been limited by distance and practical factors, for example, what school was on the bus route. Some parents chose schools based on the availability of after-school care. In other cases, the choice was influenced by the fact that an older sibling was already at the same school. Where there was a choice among several schools, parents also took into account factors such as the atmosphere at the school, where the child's friends were likely to go, and recommendations from friends and/or relatives.

Decisions for choosing a particular school were sometimes based largely upon the child's needs, as shown in the following comment:

> Friends in the street go there. She says it's "her" school ... it's ideal ... don't want to go elsewhere ... happier in own area.

One parent had spent a considerable amount of time visiting schools before making her final choice. Her experience was that staff at the state schools were not very supportive and were not keen to introduce her to staff or allow her to observe some of

the classes; she felt that her fundamental questions were not being answered. By contrast, the private schools were more willing to explain their philosophies and welcomed visits.

Another parent reported that the choice between schools had been made for their first child, and the second (target) child would be sent to the sibling's school. Therefore, when the time came to decide on a school for the target child, there was not really a decision to be made.

Even parents who reported that they had "little choice" in choosing a school for their child did not necessarily consider a relative lack of schools in the immediate vicinity to be a major drawback:

> The school he will go to is on the bus route, but we could hop in the car and drive him into town. We don't need to choose - we have already used the school for the girls and are very happy with it. But if we weren't happy, there's heaps of choice.

The one parent who felt that she had "no choice" did not elaborate on her response other than to say that the school she had chosen was the closest school.

In the main study, questions about choice will be expanded upon to include choice of secondary school; at the request of the Ministry of Education, plans for saving for future education and questions about tertiary education fees will also be included.

Settling at School

During the Adults' Perceptions of Children's Competencies interview, both parents and staff were asked how they thought each child was going to settle at school. (Some of the children had just started at school when the interviews were conducted, in which case respondents were asked how the child had settled.)

There was a remarkable degree of agreement between parents and staff regarding expectations for settling. For very few children did the opinions of the staff and the parent differ, and there were no entirely contradictory comments offered. Where opinions did differ, one or other adult offered a contrasting perspective. For example, in one case although both adults agreed that the child would settle well, the staff member was concerned that the child would initially "play on her mother", by hanging on to her leg in the pretext that she wanted her mother to stay.

Table 9 presents the data relating to this question.

Table 9
How Child is Settling at School

Settling at school	Parent No.	Parent %	Staff No.	Staff %
Will/did settle well	13	68	14	74
May/did settle after minor problems	4	21	5	26
May/did settle, but serious concerns	1	5	-	-
Don't know	1	5	-	-
Total	19	99	19	100

Thirteen of the 19 children were expected to settle, or had already settled, well at school, for reasons that were primarily related to prior experiences with - or exposure to - the school, having siblings or friends at the school already, being able to make friends easily, generally "being ready for school", and being expected to take it in their stride. Many of the children were reported to be looking forward to going to school very much.

Several parents remarked that their children's ECS experiences had been valuable and should result in an easy transition; one parent appreciated the fact that attendance at several different ECSs had given her child experience within complex settings that would be valuable when he went to school. Another parent reported that her child had settled into a new ECS well and therefore would probably settle into school well, as she did not consider that there was much difference between the two settings.

One parent commented that it is often easier for the younger children in a family to settle in at school, because they have already spent time there during events with siblings and know their way around, where the toilets are and so on. Several parents said that a particular New Entrant teacher was known to be very good with the children and this would ease the settling-in process.

Comments such as the following describe children who are expected to have little or no difficulty in settling at school:

> (She) could be a bit shy for 10 minutes, then behave like she's been there forever ... she's really looking forward to it.

He loves new challenges and meeting new people.

It's going come up to her expectations. She's been wanting to go since she was 4, she's been ready for some time. She will enjoy the attention, the learning and the classroom situation - she loves sitting down and learning things.

Several parents and staff anticipated that there might be some minor obstacles to be overcome; parents were prepared to deal with these if and when they arose. There were some concerns expressed that some of the children might have difficulty being separated from their parent(s).

His fear of being left will be an issue ... (during his school visit) he asked his mother: "You won't leave me until I'm not scared any more?"

One parent was concerned that the social and emotional aspects of settling in might not prove easy; she described her child as "testing limits" and she perceived that school has narrower limits. She predicted difficulty with any teacher who tried to control her son.

One parent was unsure whether her child would be able to overcome current toileting problems, although the child had assured her mother that she would be able to manage once she started at school. Another parent was worried that her child might be too timid, but also had confidence in the teacher to encourage the child to learn to take her turn and speak up.

Only one parent expressed serious reservations about how her child would settle. This parent reported that she had been agonising over whether her daughter would have had enough time at ECS to get a routine going, feeling that before her daughter started at school she really needed more time at ECS, in a more structured environment. She was worried that the day would be too long for her daughter, and that the school would push her too quickly. ECS staff also had some concerns about this child, commenting that it might take her a while to build up relationships with other children, and to build up her own confidence, as she did not show a lot of confidence at the ECS.

Literacy - Exposure to Books and Stories

As well as focusing on the effects of ECSs, the research team is also interested in learning more about the influences of family/whanau experiences upon children's outcomes. In the Main

Caregiver interview, one series of questions related to activities at home, with a particular focus on activities typically done with family/whanau, and reading and writing activities.

Parents were asked to describe the main activities that they and their child had done the previous weekend, as well as any other things they typically do as a family. The most frequently reported activities included outdoor physical activities (for example, sports, swimming, gardening, fishing, walks), literacy-related activities (for example, visits to the library, reading stories), social activities (for example, visits to or from friends/whanau, general "family time", parties), exploration, special events or trips, routine housework or gardening activities, and shopping.

Parents were asked whether anybody read to their child, and - if so - who and how often. In many families, book-reading played a major part and had done so since the child was an infant, for example, "We've read to her since day one." In such families, stories were regularly read, often every night without fail, by one or both parents, siblings, and often grandparents as well. Some parents reported that how often they read to their child was influenced by the time of the year, tending to read less in summer when children are more likely to be playing outside until bedtime. Other parents mentioned conflicting demands that prevented them reading to their children as often as they would have liked to.

Many children had access to books in a variety of places, including home, ECS, library, siblings bringing home books from school and Sunday school; one child's grandmother is a children's author; and another child's parents manage a bookstore.

Later, in the APCC, a series of questions related to whether anybody in the family had tried to teach the child to read or write, even unintentionally. In some families, there had been a very deliberate effort to teach these skills, in others children had picked up basic pre-reading and pre-writing skills incidentally, sometimes during play with siblings. Some parents believed that school was the place for children to learn these skills. One parent commented that although her daughter was very keen to learn how to read, she was keeping her eager until she got to school, "so that she stays enthusiastic". Only the parents of children who had attended a private preschool reported that there had been specific formal instruction within an ECS.

With regard to the "teaching" of reading and writing skills, many of the parents' responses reflected the message of the parent who answered:

She sets the pace, and we respond.

The Main Caregiver interviews yielded a wealth of information, particularly regarding the family/whanau context of individual children, and both within- and out-of-home early childhood experiences.

In preparation for the main study, refinements have been made to this instrument. A decision has been made to concentrate on gathering data about the child's first and current ECSs only. Howes (1991) reports that her longitudinal research suggests that the quality of the child's first ECS and the nature of the first child:ECS staff relationship appear to be very important for further social and emotional development. In particular, Howes has found that the first child-staff relationship is more powerful in predicting social competence with peers than are subsequent teacher relationships. Therefore, in the main study, the focus will be on finding out more about the experiences of both the child and the parent/caregiver at the first ECS the child had attended on a regular basis, as well as gathering information about their experiences with the ECS through which the child was located. Additionally, respondents will be asked to identify the ECS which they believe has had the greatest influence on their child, among all of the ECSs that the child has attended, and why.

Analysis of the data from the revised Main Caregiver interview will be an essential step towards determining the relative effects of family background and ECS experiences on outcomes for both children and whanau.

ADULTS' PERCEPTIONS OF CHILDREN'S COMPETENCIES

Children's Characteristics

During the APCC interview, parents and ECS staff were asked to respond to questions designed to build up a picture of each child: what they like, what they can do, and how they relate to other people. This interview was divided into 4 main sections: Wellbeing, Relationships with People, Language and Communication, and Exploring and Learning. These sections are based on the 5 main aims in the draft Early Childhood Curriculum Guidelines, and many of the questions were devised after studying the goals for children in the draft curriculum.

The same interview was used with both staff and parents, with the goal being to learn how these adults perceived each child's competencies in a range of areas. Both open and closed questions were asked; some questions required a rating of the child's behaviour on one of two 5-point scales:

1 = Never	1 = Not at all
2 = Hardly ever	2 = Very Little
3 = Occasionally	3 = Somewhat like
4 = Often	4 = Much like
5 = Always	5 = Very much like

Many questions were followed by a request for specific examples of the child's behaviour.

The first question in the schedule asked the respondent to "... tell me about (this child) in some detail, what sort of child is s/he usually?" A wide range of descriptions were offered, most of which were able to be coded into one or more of the following categories:

- **Positive social-emotional**, including comments describing the child as confident, friendly, easy to get on with, helpful, having a good sense of humour or a good temperament.
- **Negative social-emotional**, including comments describing the child as very excitable, cautious, difficult at times, sneaky or rude.
- **Positive cognitive**, including comments describing the child as clever, having strong language, reading, writing or general knowledge skills, being imaginative or a creative problem-solver.

- **Positive motor**, including comments relating to being physically able, or physically confident.
- **Positive independence**, including comments describing the child as independent, capable, and able to overcome his or her own problems.

The following example shows the range of characteristics that were described by one parent in response to this question:

> (He's) confident, friendly ... quite excitable - so confident (he) can go over the top ... can be difficult when he's tired or excited. He likes meeting people, seeks out people to do things, doesn't spend much time on his own. He's very happy at ECS. He likes physical play - bikes, skateboards etc. Recently, he's got interested in painting and writing - over the last 3 months - Grandma was a contributor here, chicken and egg as to who initiated this.

Many of the other responses to this question were similar in terms of the range of characteristics described, tending to focus on physical, cognitive, and social-emotional traits. Thus, these answers provided a good general description of each child and helped to "set the scene" for the questions which followed.

Answers to questions requiring a rating on the 1-to-5 scale are summarised in Table 10.

Table 10 is based on between 17 and 19 responses to each question. (Answers rated as "don't know" are not included in this analysis.)

The average ratings given by parents and staff were very similar for most questions. Pairs of ratings for the same child (that is, ratings from parents and ratings from staff) were also similar, in most instances being either identical or varying by only one point.

Table 10

Rating of Competencies

Competencies	Average rating	Lowest rating	Highest rating
Generally speaking, is XXXX able to look after him/herself (e.g., dressing, washing, going to the toilet, using a hankie/tissue etc.)?			
Parent	4.42	4	5
Staff	4.58	3	5
Is XXXX able to cope with change easily (e.g., change in routines, family circumstances)?			
Parent	4.05	2	5
Staff	3.94	1	5
Does XXXX do as s/he is told?			
Parent	3.68	1	5
Staff	3.95	3	5
Would you describe XXXX as a child who relates well to adults?			
Parent	4.32	2	5
Staff	4.11	2	5
Does XXXX hesitate about joining a group of children?			
Parent	2.68	1	4
Staff	2.79	1	4
Is XXXX accepted readily by children s/he meets outside the home?			
Parent	4.42	3	5
Staff	4.11	3	5
Would you describe XXXX as a child who is a good communicator?			
Parent	4.26	2	5
Staff	4.21	2	5
Would you describe XXXX as a child who is interested in new places and who is always asking questions?			
Parent	4.21	1	5
Staff	3.67	2	5
Does XXXX play with things like blocks, dolls, water, or Lego, in a variety of different ways?			
Parent	4.21	3	5
Staff	3.82	2	5
Would you describe XXXX as a child who gives up easily (if s/he is having real difficulty with something)?			
Parent	2.72	2	4
Staff	2.11	1	4

Table 11 presents data relating to the same questions presented in Table 10, this time identifying the competency constructs associated with each question. For example, the self-care construct was measured by asking whether the child was generally able to look after him/herself. Perseverance was measured by asking about the child's persistence when facing real difficulty. Social confidence was measured by checking on the child's behaviour when joining a group of children.

Table 11

Adults' Perceptions of Children's Competencies

Competencies	Mean		S.D.*	
	Parents	Staff	Parents	Staff
Self-care	4.42	4.58	0.51	0.61
Accepted by peers	4.42	4.11	0.61	0.57
Relates to adults	4.32	4.11	0.75	1.10
Communicates	4.26	4.21	0.93	0.85
Explores	4.21	3.82	0.54	0.95
Inquisitive	4.21	3.67	1.08	1.08
Copes with change	4.05	3.94	0.78	0.87
Obeys instructions	3.68	3.95	0.82	0.71
Confident about joining peers**	2.32	2.21	1.00	0.85
Perseveres**	2.28	2.89	0.75	0.90

* S.D. = standard deviation

** Re-scored in the positive

Generally, parent and staff ratings were in agreement. The greatest differences in perception were to do with exploring and being inquisitive (showing curiosity and asking questions). It was the latter characteristic that produced the biggest within-group differences as well, indicated by the standard deviations of 1.08.

Differences

Where there was a great difference between the rating of the parent and the rating of the staff, it was usually due to differing perceptions of - and expectations of - the child. For example, in response to the question, "Does she do as she is

told?", one parent answered "never", perceiving her child to be easily distracted, whereas the ECS staff replied "always", adding that this same child would always help willingly when asked.

Respondents were asked if the child had done anything lately that had surprised them, with a probe for achievements. Achievements mentioned included the following:

Cognitive achievements

He says all the Samoan colours by himself - he knows them all.

The skill and thought (in her) art-work.

At (ECS) she made a boat out of wood, had cut it and glued the pieces together ... I was astounded that she had the concentration span and spatial ability.

Social-emotional achievements

She's played more with other children - hasn't followed us (staff) around.

He's been talking this week about his mates at school, after a period of being on the fringes - he's now made a good friendship - quicker than I thought it would happen.

Cultural-spiritual achievements

She sang and danced on the stage by herself ... she gave a solo performance to the guests at Hawaii.

She was problem-solving (with other children) - doing "active listening" to solve needs, like an adult - meeting everyone's needs, she was determined to meet needs.

Independence achievements

He brushed his teeth on his own.

She went to school on the bus by herself ... I don't usually expect children to be that independent!

Physical achievements

His swimming ... last year he wouldn't go near our pool ... he's had swimming lessons ... swimming away has been a real breakthrough ... he suddenly got his confidence up ... last year he was frightened.

She's been doing forward and backward rolls, and walking on the beam at gym.

In response to a question regarding whether there had been any changes in the child over the past year that had led to increased enjoyment of the child, many different answers were

given. Several people mentioned that children's language skills had increased, also that children's greater independence meant fewer demands on adult attention. The following comments were offered:

> He's growing up and becoming more independent ... he takes care of his young brother and sister; he's a responsible child.
>
> (I enjoy) his ability to communicate and being able to discuss things with him.
>
> She seems so much more grown up - her conversation and sense of humour have developed even more so.
>
> He's developing new skills and is able to express himself more.
>
> (I enjoy) her communication, her writing, her thirst for learning - I will miss her companionship when she goes to school.
>
> We feel proud when he sings Samoan songs and talks Samoan.

Language Skills

As a complement to the APCC, staff were asked to rate the children's receptive and expressive language skills using the Adaptive Language Inventory (ALI), which required staff to assign a rating to each of 14 variables, using the same 1-to-5 scale that was used in the APCC. (The Competent Children research team adapted the ALI from an instrument shared by researchers from the United States.) Staff were also asked to respond to 2 open-ended questions regarding each child's overall language skills.

The ALI focused not only on a child's language skills (that is, their ability to understand others and to communicate through language), but also on their use of language as a tool for social interaction. For the purposes of analysis, scores from selected components of the ALI were combined with scores from selected components of the APCC to yield an overall language rating for each child.

The children who scored most highly when these composite ratings were analysed had the following characteristics: their language was considered easy to understand, they talked spontaneously and easily to peers and also related well to adults, they frequently talked about things they had seen or experienced, they persisted with communication if other people did not at first understand, they joined readily in language-

based activities, and they listened carefully and reacted appropriately and thoughtfully to questions.

The following comments are representative of those offered by staff when asked to describe these children's overall language skills. These comments were given in response to 2 open-ended questions - how would you describe this child's ability to listen and follow instructions, and how would you describe this child's ability to get his/her ideas across? Where appropriate, comments made by staff or parents about the same child during the APCC are also presented.

> She is very adept at listening and following instructions ... she will take her turn, listen and then do as required.
> [APCC] She communicates well and is good at gaining your attention ... easy to talk to ... will sit beside you and have a conversation while she's doing something else at the same time.
>
> (She has) a wide vocabulary and is therefore able to communicate in a really precise way - her mother talks to her really precisely, gives her details about everything that's going on.
> [APCC] (She relates) really freely - shares new information, talks about home, approaches you ... helped (new staff member) with (children's) names when she started.
>
> She always comes to school with a new word or an idea for actions in a song-game.
> [APCC] She speaks clearly in both Samoan and English.
>
> He shows the ability to alter language and will actually show friends to get his ideas across, whereas with adults he will explain directly with facial and voice expression.
> [APCC] (He relates to adults) very well - can establish good rapport with adults he knows well. (One of his strengths is) engaging with others - real or fantasy - to act out interaction.
>
> Being a bright and cheery girl, she is always keen to tell you what she has been doing and wants to do.
> [APCC] She has really good vocabulary skills - seems to pick up words and grasp their meaning.

By contrast, the following comments were offered by staff to describe some of the children whose language skills ratings indicated that they were perhaps less competent:

> She is not assertive (doesn't have the) skills or confidence to tell you things - that's a concern. Her voice is monotonous, not much expression. She doesn't try to get things, gives in very easily, stands back

a lot in situations unless she's one-to-one, then she'll answer "yes" or "no".
[APCC] She approaches staff and asks things, follows us around, but doesn't chat freely with us - not a lot of fun with us.

He gets frustrated if he can't get things out properly and then starts to stutter, but in the last few months he has been really quite good ... he does get frustrated if he has to repeat things to other children.
[APCC] He doesn't really talk to adults - he bullies them around. He won't do what he's asked unless there's something in it for him ... when people are visiting, he won't say hello or goodbye, unless he's in the mood.

Over all, he chooses to be his own man and do things when and if he pleases. He will often choose to ignore the fact that he has been requested to do something. His spoken language is good and if he wishes to express ideas, he is very capable of doing so.
[APCC] He's getting better (at relating to adults), but he used to snap at people ... today he seemed more positive ... generally a bit negative ... recently he wouldn't accept alternative suggestions from an adult and said, "That's dumb!"

Table 12 identifies the ECS attended by the children who scored the highest on the composite APCC/ALI rating.

Table 12
ECSs Attended

ECS types attended by children	Scores %
CCC/KG/PILG/PILG/CCC/PC/PC/FDC	90 - 100
CCC/CCC/PILG/PC/PC	80 - 89
PC/KG/KG	70 - 79
FDC/KG/PC	50 - 69

Note: CCC = childcare centre
KG = kindergarten
PILG = Pacific Island language group
FDC = family day care
PC = playcentre

Observation of Children

All pilot study children were observed individually 5 times for periods of 1 minute, during the researchers' 3 visits to the ECS. Researchers sat or stood in close proximity to the child and noted the type of activity each child was doing, who they were with, and whether any social interactions occurred during the observation. If interaction occurred, it was categorised according to whether it was between the child and other children, or between the child and adults.

If the interaction involved adults, the intensity of the adult's interaction was noted; if the interaction was between children, competency behaviours (related to peer relationships, and exploring and learning) and aggression were noted and described.

From these observations it was possible to build up a profile of how each child spent his or her time, including the frequency and degree of contact between adults and children and the social competencies demonstrated by the child. These profiles differed widely from child to child and from ECS to ECS. Particularly noteworthy are differences in the amount of contact between children and adults, as well as differences in the intensity of such contact (for example, group-level contact only, compared with one-to-one personal contact). Some adult-child ineractions involved only minimal responses from adults; others involved intense interactions which expanded the child's play and/or language.

For one pilot study child, during 3 visits to the ECS, not one of the observation periods revealed any one-to-one interaction with adults. At the same ECS, during 20 different observations (spread over 4 visits), another child was seen to interact with adults only 3 times, that is, only 15 percent of the time. In this particular ECS there was a low adult:child ratio. Nevertheless, even at ECSs where the adult:child ratio was relatively high, not all children were in regular contact with adults, although the likelihood of one-to-one contact occurring was much greater.

For the main study, researchers have refined the Child Observation Schedule to concentrate on fewer variables, resulting in a more focused instrument with a higher degree of reliability between observers. Two new variables have been added, both relating to adult-child interaction. One captures the occurrence

of cognitive-language extension, the other identifies the overall tone of the interaction as being either positive or negative.

Children's Interview and Tasks

As well as being observed, children were "interviewed", that is, asked to respond to a short series of questions. They were also asked to carry out tasks which assessed their skills in a range of areas. This assessment focused on 4 main areas: social problem-solving, a range of mathematical concepts (for example, numeracy, shape recognition, mental computation), name writing and concepts about print (adapted from Marie Clay's research), and gross-motor skills.

All of the pilot study children were seen individually towards the end of the data collection phase, after interviews with parents and ECS staff had been completed. Most children's interviews and assessments took place shortly before the children were due to start at school.

With one or two exceptions (for example, where siblings were present), children were not in the presence of other children during the interview and assessment, although parents and ECS staff were sometimes nearby. When the interviews and assessments were carried out at the ECS, this generally meant that children were invited to accompany the researcher to a staffroom or other quiet area. Some of the interviews were carried out at children's homes.

Most of the children appeared to enjoy the interview and associated tasks, particularly the gross-motor skills exercises (although a small number of children found it very difficult to hop and balance on one leg). The mathematical concepts tasks also intrigued the children, as there were a range of small objects (for example, dice, counters, shapes) to be examined.

Because all of the child assessment tasks were originally intended to be administered again when the children reach age 6, some of the tasks were not expected to be answered correctly.

To begin the interview, all children were asked a range of questions relating to their activities at ECS. They were asked to identify their most and least favourite activities, what they helped with and what they needed help with, what they were good at doing and their approach to problem-solving. Answers to these questions varied considerably from child to child and from ECS to ECS.

Activities commonly mentioned as favourites included manipulative play (for example, blocks, Duplo, puzzles), dramatic play (for example, dress-ups), physical activities (for example, playing on the jungle gym, climbing trees), and creative activities (for example, painting, drawing). Least favoured activities included being on the receiving end of aggression (for example, getting beaten up), specific activities (for example, "I don't like to play with music things because they are too loud"), and waiting for adults. Several children reported that they liked everything.

Children explained that they helped with many different things at the ECS - many children reported that they helped with setting up, cleaning up, and putting away activities during sessions. One imaginative child reported that "... I do rescues, because I come from Krypton, like Clark Kent. I got brought here by a rocket, so were Mum and Dad and my sister!" (During the APCC for this child, his mother reported that his imagination was one of his strengths, that he used words to engage in fantasies and liked to draw other people into these as well. On the other hand, his tendency to become engrossed in his fantasies was also described as a drawback, because he was not always able to see that other people were not interested.)

Identifying what they were good at was difficult for some children; several were unable or unwilling to answer this question. Among the responses that were offered, creative activities were mentioned quite often (for example, art, "making things", and painting), as were physical activities (for example, climbing trees, swinging on the jungle gym, getting the balls in the basketball net). Several children listed multiple strengths, for example: "I'm good at writing my name, getting some stamps ..." and "I'm good at playing, good at karate and Kung Fu."

Several children were also unable to identify what they were learning to do that they still needed help with, and some children replied that there was nothing they needed help with. One child added, "I'm nearly 5," perhaps implying that 5-year-olds should be capable of anything. Areas that children did need help with included writing ("I've only learned to do a 't' and a 'u'"), learning Maori, and doing the haka.

Social Problem-solving

The social problem-solving section of the interview began by asking asked children what they did when they ran into a problem when trying to make something or trying to do something. Answers

to this question were coded into categories which reflected both passive and active strategies for solving problems. The most common strategies were to request help, talk about the problem, persist, or give up. A small number of children were unable to answer this question or gave inappropriate responses, which indicated that the question had not been understood.

Children who responded that they would ask for help were more likely to attend an ECS with a high adult:child ratio; children who were likely to give up or go on to something else were more likely to attend an ECS where there were fewer adults available.

In Table 13, the verbatim responses are presented by ECS type; inappropriate responses have been omitted.

Table 13
Social Problem-solving

Responses	ECS type
"Ask somebody to help - don't just stand there and cry."	PC
"Get somebody to help."	PC
"Just start it again."	PC
"I get a grown-up."	PC
"Go and ask people."	PC
"Go and ask (ECS staff)."	FDC
"When some people hit me, say 'I don't like that,' and then some adults come and cuddle me."	CCC
"Start making (it) again."	CCC
"Tell the teacher a lot of times. Sometimes I can figure the problems out myself."	CCC
"Ask my teacher."	KG
"Do something else."	KG
"Tell the teacher."	KG
"Just make something else."	KG

Responses to additional social problem-solving questions were also interesting. Children were told that there were 2 children who wanted to play with the same toy, and that 1 of them had been

playing with this toy for a long time already. They were asked what the other child could say or do so that they could have a turn. Answers were coded into 1 of 3 categories: social requests (for example, a polite request to the other child), aggressive demands (for example, insisting that the other child share, using intimidation), or passive responses (for example, choosing something else, going away.) There were a small number of responses that were inappropriate and therefore unable to be coded.

Although all children were interviewed separately, at some ECSs there was a remarkable degree of consistency in the answers given by different children. For example, the following responses were all given by children who attended the same ECS:

Please may I have a turn?

Could I please have a turn with that?

Could I have a turn?

Excuse me, but I want a turn.

Please can I have a go?

The similarity of these responses indicates that staff at this ECS have probably encouraged children to use such phrases. At this ECS, there was a noticeable emphasis on sharing, resolving differences peacefully, and getting along with others.

Name Writing and Concepts About Print

Drawing from the work of Marie Clay, the researchers assessed the children's concepts about printed language and their ability to write their name. The Concepts About Print test is designed to check on concepts such as the following: correct orientation of the book, awareness that print (not picture) tells the story, what a letter is, what a word is, and knowledge of the purpose of punctuation marks (for example, the question mark). The test was designed to be used with children aged between 5 and 6, and is commonly used in schools as part of the "6-year-old net".

The Competent Children researchers used only a subset of the items in the full test. Because the entire test was not used, the "Sand" and "Stone" booklets which accompany the test were not suitable, and researchers substituted books of their own. This led to difficulties with consistency of administration, as different books were used by each researcher. If this section of the children's interview is retained for the main study, the

approach will be changed so that the researchers are consistent in their administration of these items.

Despite the difficulties encountered, we are able to summarise some of the results. Fifteen of the 19 children (79 percent) were able to indicate the front of the book correctly and just under 50 percent were able to indicate where the researcher should start to read. Sixty-three percent of the children were able to point out a word, and 11 percent were able to read what the word actually said. Sixty-three percent of the children were also able to indicate the first letter of a word, and 21 percent were able to correctly identify the letter they had pointed out.

The children who were able to respond quickly and appropriately to these items tended to be children whose parents had reported wide exposure to books and other reading materials. These children were keen to look at the book presented during the assessment and had a good idea of how to turn the pages and which way the story flowed.

In addition to studying children's concepts about written print, children were asked if they could write their first name. If a child was not able to write his or her name spontaneously, the researcher wrote it and the child was asked to copy it, either underneath or by writing on top. The same exercise was repeated for the child's last name.

Responses to this task varied a great deal, and ranged from one child who refused to write anything at all, to another child who was able to write her entire name - first, middle, and last names - spontaneously and correctly.

Responses were coded into 1 of 5 categories: able to write (first/last) name spontaneously and correctly, able to write name spontaneously with one or more errors, able to copy name correctly, able to copy name with one or more errors, unable to write or copy name/did not attempt. Results are presented in Table 14.

Table 14

Name Writing

Writing ability	No.	%
First name:		
Writes first name spontaneously correctly	8	42
Writes first name spontaneously with one or more errors	7	37
Copies first name correctly	1	5
Copies first name with one or more errors	2	11
Unable to write or copy name/will not attempt	1	5
Total	19	100
Last name:		
Writes last name spontaneously correctly	3	16
Writes last name spontaneously with one or more errors	0	0
Copies last name correctly	2	11
Copies last name with one or more errors	12	63
Unable to write or copy name/will not attempt	2	11
Total	19	101

Clay (1972) points out that the child who can write his or her name by the time s/he goes to school already knows that the message (the name) consists of particular marks (letters), placed in a certain sequence, which makes a recognisable pattern. Thus, with reference to the data in the preceding table, 79 percent of children had knowledge of these basic concepts to varying degrees, reflected in their ability to write or attempt to write their first names using letters or letter-like symbols.

Errors included transposing letters, mirror-writing, and letter repetition. One child with an unusual name was able to spell his name aloud, but was not able to write it spontaneously. Another child, with a name 9 letters long, was able to write only the first 4 letters.

Mathematical Concept Items

The mathematical concept items were drawn from the Ministry of Education's Beginning School Mathematics (BSM) Evaluation tasks,

which incorporate Jenny Young-Loveridge's SENS interview.[3] The Ministry of Education (Visser and Bennie (1992)) has used this evaluation with approximately 200 new entrants in selected locations throughout New Zealand, to provide baseline data on students' mathematical knowledge. Only selected components of the BSM Evaluation were used by the Competent Children team, in the interests of time. The mathematical concept tasks represented about a third of the entire children's interview, which the researchers wanted to be able to complete in half an hour or less.

Young-Loveridge (1991) has found that the following tasks were most highly correlated with overall performance in subsequent years: forming sets, numeral identification, pattern recognition, rote counting, sequencing forwards, and enumeration. These tasks therefore formed the basis for the Competent Children interview, supplemented by several other tasks recommended by the Ministry's research team and a representative from Teacher Support Services.

Table 15 presents the data for the percentages of children who successfully completed each task, as described in the following reports: Young-Loveridge's Christchurch longitudinal study and Hamilton intervention study, the Ministry of Education's BSM Evaluation study and the Competent Children pilot study.

A provisional comparison, in Table 16, of data from other studies with the Competent Children data reveals similar patterns in the results. However, caution must be used in comparing these results, due to the small size of the Competent Children sample, and the ages of the children in the sample at the time of the assessments (ranging from 4 years 3 months to 5 years 1 month).

[3] SENS stands for School Entry Numeracy Skills.

Table 15

Mathematical Concepts
(Percentages of Children in 4 Studies Successfully Completing Tasks)

Task	CHCH*	HAM**	MOE***	CC****
Forming sets				
2	94	96	96	89
5	62	64	74	68
9	46	52	65	47
13	-	-	36	11
Numeral identification				
2	59	72	77	89
5	64	70	74	84
8	-	-	61	79
9	32	40	47	58
14	-	-	31	32
27	-	-	14	0
84	-	-	8	11
Pattern (dice) recognition				
2	-	--	87	84
5	52	55	50	63
6	-	-	47	53
Rote counting				
To at least 5	93	93	98	100
To at least 10	74	82	85	95
To at least 20	28	25	38	26
To at least 30	10	13	18	11
Sequence forwards				
Number after 5	62	63	65	58
Number after 16	31	25	33	32
Number after 29	-	-	11	21
Enumeration				
9 objects	54	65	69	84
14 objects	-	-	36	42

SAMPLE SIZES

*	CHCH (Christchurch):	81 (47 girls, 34 boys) aged 5.0 - 5.1 years
**	HAM (Hamilton):	sample not identified
***	MOE (Ministry of Education):	199 (89 girls, 110 boys) who had been at school between 5 and 10 weeks
****	CC (Competent Children):	19 (12 girls, 7 boys) aged 4.3 - 5.1 years

Table 16

Additional Data for Questions Shared by Competent Children and BSM Evaluation Studies

Task	MOE	CC
Shape recognition		
Hexagons	37	21
Rectangles/oblongs	71	32
Triangles	23	42
Movement and position		
Outside	88	53
Next to	84	47
On a line	77	53
On a corner	46	37
Left side	42	16
Right side	35	32
Middle and top	37	32
Right side	35	32
Pattern		
Line of symmetry	40	21
Matching parts	57	32
Linear patterning	50	16
Mental computation		
2 minus 1	66	68
2 plus 3	27	26
7 minus 3	13	26

Some differences between samples in Table 16 could well be explained by different administration styles of researchers.

Gross-motor skills

The final section of the children's interview, the Gross-motor Skills task, was based on the South Australian Motor Co-ordination (S.A.M.) test for 5-year-olds.

Children were asked to hop forward, one leg at a time, to balance on one leg, to walk along a narrow piece of masking tape laid out on the floor, and to bounce and catch a ball. As previously mentioned, most children enjoyed these tasks and did them confidently and well. However, one child completely refused to attempt these tasks, although observation of his general co-

ordination skills indicated that he would have been unlikely to have any difficulties.

A small number of children (generally only 2 or 3) were unable to meet the requirements of some of the tasks, for example, to hop so many times and/or to balance on one leg for so many seconds. The parents of these children tended to mention difficulties with physical co-ordination spontaneously, often during the APCC, as in the following examples:

> She hasn't any natural grace, she's quite a clumsy child ... her legs are always covered in bruises.
>
> (He's) anxious about some things - it took him a while to get up confidence to climb the (narrow and steep) stairs, he needed a lot of encouragement. Now, when he's confident he's fine, but it can take a lot of trial and error. He hesitates, but can motivate himself to try something bit by bit, for example, climbing up a rocket in the adventure playground.

A physiotherapist consulted by the research team recommended that no follow-up was needed for children performing below par on the S.A.M. test, unless the parents or ECS staff believed that the lack of co-ordination was seriously impeding their ability to play or carry out other activities. Nevertheless, if the researchers suspected that a child's gross-motor skills were below average, this was mentioned to the parents in a non-threatening way, and a note was made on the child's file to monitor their co-ordination when the next contact occurred.

Centre or Service Rating

Central to the Competent Children research is an analysis of the quality features of different ECSs. Previous research studies have identified the key structural variables of group size, adult-child ratio, and staff qualifications as having a significant impact on the quality of ECS programmes. As well as focusing on these variables, the Competent Children researchers are seeking to identify other variables that result in positive outcomes for children.

During each visit to the ECS, researchers rated 47 different components of the ECS programme, using a composite instrument called the Centre/Service Rating Scale. This scale was based in part on similar scales developed by Bryant, Clifford and Peisner (1988), Holloway and Reichhart-Erickson (1988), Farquhar (1991), and Hyson, Hirsh-Pasek and Rescorla (1990).

The instrument consisted of 47 variables, which were rated using the 1-to-5 scale shown below:

1 = not at all like this ECS/this never happens
2 = very little like this ECS/this hardly ever happens
3 = somewhat like this ECS/this occasionally happens
4 = much like this ECS/this often happens
5 = very much like this ECS/this always happens

The variables were grouped under the following main headings:

- Staff-child interaction
- Child-child interaction
- Staff-staff interaction
- Staff-parent interaction
- Language
- Cultural inclusiveness
- Programme/activity focus
- Overall group sound
- Physical environment, resources, and safety.

Throughout every visit to each ECS, researchers carefully observed the environment, the programme, and the interactions between children and adults. A final rating for each variable was assigned at the end of the visit.

Researchers referred to precise guidelines before making their final ratings. For example, when rating "staff's responsiveness to children", researchers considered whether staff responded quickly, adapted their responses to children, their physical proximity to children, use of verbal encouragement, and so on. If researchers considered that staff always reacted to children in a highly responsive manner, the ECS was rated a "5"; if staff never reacted in this way, a rating of "1" was given, and so on.

Table 17 provides a breakdown of the ratings for the 16 components which proved to have the greatest inter-observer reliability among researchers and were considered to be a good indication of the overall quality of each ECS.

Ratings are presented here averaged over all visits. The average rating is the average for *all* ECSs in the pilot study. The *lowest average rating* is for the (one or more) ECS which had the lowest average for this item, the *highest average rating* is for the (one or more) ECS which had the highest average.

Table 17

Centre or Service Rating

Rating	Average rating	Lowest average rating	Highest average rating	S.D.
Average ratings between 4 and 5: very acceptable, good to high standards evident				
There is enough usable space indoors and outdoors so that children are not crowded.	4.5	2.75	5	0.80
There are enough age-appropriate toys/books/equipment to avoid problems of waiting, competing, and fighting for scarce resources.	4.34	3	5	0.69
Children can select their own activities from a variety of learning areas.	4.22	2.75	5	0.96
Equipment and activities facilitate practice of gross-motor skills.	4.05	3	5	0.81
Responsiveness to children.	4.05	3	5	0.83
There is easy access from indoors to outdoors and children move freely between the two (weather permitting).	4.02	2	5	1.18
Average ratings between 3 and 3.99: some room for improvement				
Staff model - and encourage children to use - redirection, positive reinforcement, explanation, and encouragement as guidance/discipline techniques.	3.82	2.5	5	0.94
Both child- and staff-initiated activities are evident during the observation period.	3.7	2	4.75	1.15
Good safety practices are carried out by individual staff as well as being evident throughout the centre.	3.66	2.25	4.3	0.76
Staff model/guide children within the context of centre activities.	3.64	2.25	5	1.00
Staff ask open-ended questions that encourage children to choose their own answer.	3.51	2.25	5	0.92
Children engage in child-initiated imaginative play (e.g., storytelling, singing, dramatic play).	3.48	2.5	4	0.62
Adults acknowledge and extend child-initiated themes.	3.45	2	4.6	0.98
Children work on social and maths/science problems and experiment with solutions themselves.	3.22	1.75	4.3	0.94
Average ratings between 1 and 2.99: improvement needed, poor standards				
There is evidence of recognition/acceptance of the cultures of the children at the centre/service.	2.43	1	3.5	0.85
Tikanga Maori and/or te reo Maori is evident.	1.88	1	2.75	0.77

Although individual ECSs differ in the areas needing improvement, it can be seen that all ECSs were consistently rated low on cultural inclusiveness, with regard to both Maori and other cultures.

Characteristics of Centres Which Scored Highly on Each Variable

♦ **Staff-child interaction:** Staff at ECSs that yielded a high overall score for this section had the following characteristics: they were involved with the children, responded appropriately to the children's needs, and provided support and encouragement when necessary. They engaged the children in conversations. When discipline was required they used techniques such as redirection, reinforcement, and explanation. They encouraged children to try new experiences and introduced new materials and activities as appropriate. These staff spent much of their time directly involved with the children, rather than doing other activities. They often knelt or bent to the children's level to establish better contact.

In contrast, staff at ECSs that did not rate well often kept a physical and emotional distance from the children and rarely became involved in children's activities. Conversations tended to be short, or limited, with interaction often being one-sided. Threats were used as discipline ("If you're not good, then ..."), and children were not likely to approach adults spontaneously. Children played independently with no encouragement from adults to try new activities or experiment with different approaches. Staff did not get down to the children's eye level, instead talking to them from a height.

♦ **Child-child interaction:** Children at ECSs rated highly on this variable were seen to share, extend comfort to other children, offer to help or in other ways support, and co-operate with each other. At such ECSs, there was little or no verbal or physical aggression observed; disputes were able to be resolved peacefully and often without adult intervention.

♦ **Staff-staff interaction:** Staff in all ECSs visited appeared to be mutually supportive and did not argue or contradict each other in front of the children. In family day care homes, this variable was not rated, as staff were on their own in the home and there were no opportunities to observe them interacting with the family day care co-ordinator.

♦ **Staff-parent interaction:** This proved to be a somewhat difficult variable to measure, for several reasons. In childcare centres and family day care homes, the children typically arrived very early in the morning and went home quite late in the day, so there were limited opportunities to observe interaction between parents and staff. Additionally, parents were committed to their own schedules and often did not have time to spend with staff at pick-up or drop-off times due to time pressures. Limited interaction did not necessarily mean a poor relationship existed; additional information about the relationship between staff and parents was gained through individual interviews.

Interaction that was able to be observed tended to be warm, although somewhat rushed in ECSs with a low adult:child ratio. In all ECSs, there were procedures in place for exchanging information about children and upcoming events of interest. In the larger ECSs, these included notebooks in which photographs and brief notes about children were placed, regular newsletters and notice boards announcing seminars, workshops, and so on. In smaller settings, information was often shared during telephone calls between parents and staff; at 2 ECSs, staff were reported to make home visits. At ECSs with high parent participation, discussion about children occurred naturally during the course of the session.

Those centres rated highly on the staff-parent interaction variable encouraged and valued contact with parents, as well as parental input. They typically kept updated notice boards advising parents of coming events and items of interest, and had systems in place for sharing information between home and ECS.

Because of the challenges in accurately gauging the relationship between parents and ECS staff, this variable will not be rated in the longitudinal study.

♦ **Language:** Not unexpectedly, staff at ECSs rated highly on staff-child interaction variables typically also scored highly on variables relating to the appropriate use of language. These staff used clear and unambiguous language when talking with children and held age-appropriate conversations. Open-ended questions were used to extend children's thinking and creativity.

However, researchers observed that stories and musical activities typically represented only a small part of each session at many of the ECSs, if occurring at all, although books and musical instruments were freely available. In contrast, at the Samoan language group, music (songs, chants and other

rhythmic activities) played a major part in the programme, reflecting cultural values.

♦ **Cultural inclusiveness:** In the area of cultural inclusiveness, all ECSs showed that there was room for improvement. In centres where acceptance and recognition of multicultural values were in evidence, there was more likely to be an emphasis on Maori rather than other cultures, although at some centres children from cultures other than Maori were regular attenders. For example, at one centre, the staff identified the children on the roll as being Pakeha, Maori, Pacific Islanders, Dutch, Swedish, English, and Fijian-Indian. Yet this centre scored an average rating of "3" for multicultural awareness, indicating that there was not a strong multicultural focus within the programme.

Even at centres where there was a stronger than average Maori component, there was more likely to be an emphasis on written rather than oral language. For example, greetings, colour and number charts, and songs were often displayed on the walls, yet it was rare to hear waiata or mihi.

However, in one centre, children were heard using te reo spontaneously, as when one child said "ka pai" to express his delight at receiving a birthday card made by the ECS staff. Additionally, several parents (from different centres) mentioned their appreciation that their child was learning te reo at ECS. In fairness to the centres participating in the research, it should be acknowledged that te reo and tikanga Maori may have been a more integral part of some programmes during times or days when researchers coincidentally were not visiting. The fact that some parents commented on their children's growing awareness of te reo Maori indicates that te reo was certainly being incorporated into certain programmes to some degree.

♦ **Programme/activity focus:** Researchers observed and rated the range of activities and materials available for children. They looked to see if activities were changed during a session - or from session-to-session - to stimulate children's interest and whether staff offered materials or information to facilitate play and learning around particular themes. Evidence of both staff- and child-initiated activities was sought, with particular attention paid to the prevalence of child-initiated activities.

Opportunities for children to experiment with mathematics, science, and social problem-solving were noted. Staff were observed to see whether they displayed awareness of sexism and

strategies for encouraging non-sexist behaviours and attitudes in children, for example, by avoiding stereotypical groupings such as boys in one corner and girls in another. Researchers also noted the amount of time children spent in small groups or alone, compared to the amount of time spent in large-group, teacher-directed activities. Another consideration was whether children were allowed to complete activities they had started, or were constantly directed by adults to move on to other activities.

♦ **Overall group sound:** The overall group sound was another indicator of the atmosphere of each ECS. Not unexpectedly, individual ratings for this variable were very similar to the corresponding ratings for child-child interaction. When assigning a rating to group sound, researchers considered a range of possible influences, including weather, adult attitudes, activities, and noise from other rooms. At ECSs that scored highly on this variable, there were few or no children heard screaming, crying, harassing each other in loud voices, or being otherwise verbally aggressive.

♦ **Physical environment, resources, and safety:** The physical layout of each ECS was assessed. Researchers considered the ease of access between indoor and outdoor areas, adequacy of space for individual and group activities, and the availability, accessibility, appropriateness, and range of resources such as toys, gross- and fine-motor equipment. Staff were expected to have high levels of awareness about the safety of equipment and toys. Adult:child ratios were also taken into account.

All but one of the ECSs were considered to have adequate indoor space - the sole exception was a programme operating from a classroom with limited room for children to move around and spread out; this environment appeared to be restrictive. The programme at this ECS was noticeably more adult-directed than at other ECSs, with children being involved in many large-group, adult-directed activities. This may have reflected lack of space, but it was also related to programme goals.

Children at all ECSs had access to large, spacious outdoor play areas, some of which included tree forts, climbing frames, swings, trampolines, ride-on toys, and other gross-motor equipment. However, at several of the ECSs, access to the outdoor play area was restricted and children had to wait until an adult allowed access, by nominating "outdoor time" or by opening doors leading outside.

Safety was a concern at one ECS, with regard to electric appliances being left plugged in near water, in an area frequented by children.

All centres met the minimum legal requirements for adult:child ratios. At those ECSs where there was a high degree of parent participation, this adult:child ratio was considerably higher than the legal requirement and such centres were rated highly on this variable.

Profile of Each ECS

Following an interview with the head teacher, supervisor, co-ordinator, or other knowledgeable contact, a profile of each ECS was developed. This profile was based on information including roll numbers, staff-child ratios, staff qualifications and years of ECS experience, fees, charter development and implementation, typical programmes, and other structural variables. As much of this information must be considered within the context of how individual ECSs operate, it will be discussed only briefly in this report.

The predominant socioeconomic-status profile of the children at these ECSs varied from mainly middle-class to mainly low-income/on benefits, and the ethnic profiles ranged from largely Pakeha to multicultural. The number of children on the rolls ranged from 29 to 57; in the case of the family day care scheme, the roll included all of the children in the area in which the pilot study was carried out. There were vacancies on some of the rolls.

The length of time that children were typically enrolled at each ECS, estimated by the respondents, ranged from 1 to 4 years. Some ECSs grouped children by age, others did not.

Numbers of full- and part-time staff at each ECS varied considerably. The 2 playcentres and the Pacific Island language group were staffed solely by volunteers; indeed at all centres - other than family day care homes - volunteers (for example, parent-helpers) played a role.

As well as answering specific questions, respondents were also asked to provide the researchers with any relevant material related to their ECS, including any introductory brochures that were handed out to parents considering enrolling their child. This material provided additional insight into the philosophies and practices of the ECSs in the pilot study.

CONCLUSION

This pilot study has served 4 purposes:

- to pilot the instruments; field-work procedures; scoring, data entry, and analysis procedures;
- to subsequently modify instruments and procedures to ensure that the main study is more effective and is manageable for the resources available;
- to indicate important parameters for the main study sample;
- to indicate some preliminary patterns in the data.

The work was too preliminary to test the theoretical model with only 19 children. However, there is already a strong indication that complex early childhood histories and "packaging" (multiple use) of ECSs will become an important focus of the main study.

The main study will begin in late 1993 with a contract signed covering a 3-year period to mid-1996.

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